

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Currently Amended) A method comprising:
converting color data for an image [[to be displayed]] from a first color space to a second color space;
compensating for one or more selected from a change in backlight intensity and a change in ambient brightness by modifying, in the second color space, a color intensity for one or more portions of the image;
converting the modified color data from the second color space to a third color space; and
[[applying a gamma transformation on the modified color data in the third color space to generate adjusted color data for one or more portions of the image;
storing the adjusted color data in a frame buffer; and]]
displaying the [[adjusted color data to reduce power consumption of a display device]] image after said compensating.
2. (Currently Amended) The method of claim [[1]] 73 wherein the color intensity is modified before the gamma transformation is applied.
3. (Currently Amended) The method of claim [[1]] 73 wherein the gamma transformation is applied before the color intensity is modified.
4. (Previously Presented) The method of claim 1 wherein the third color space comprises the color space to be used to display the image.
5. (Original) The method of claim 1 wherein the first color space and the third color space are the same color space.
6. (Original) The method of claim 1 wherein the first color space comprises a red-green-blue (RGB) color space and the second color space comprises a hue-saturation-intensity (HSI) color space.

7. (Original) The method of claim 1 wherein the first color space comprises a YUV color space and the second color space comprises a hue-saturation-intensity (HSI) color space.
8. (Original) The method of claim 1 wherein the first color space is chosen from the group of YUV, YCrCb, CIE, HSV, YIQ, CMYK, RBGA, Pantone, Munsell, NCS and the second color space is chosen from the group of YUV, YCrCb, CIE, HSV, YIQ, CMYK, RBGA, Pantone, Munsell, NCS.
9. (Currently Amended) The method of claim 1 wherein said compensating
 [[applying a color transformation on the color data in the second color space]]
 comprises:

 determining an image brightness profile for the image [[to be displayed]];

 generating a color transformation in the second color space based on the image
 brightness profile; and

 applying the color transformation to the color data.
10. (Original) The method of claim 9 further comprising modifying a backlight intensity based on the image brightness profile.
11. (Currently Amended) The method of claim 1 wherein said compensating
 [[applying a color transformation on the color data in the second color space]]
 comprises:

 determining an ambient light level of an environment for the display device;

 generating a color transformation in the second color space based on the ambient
 light level; and

 applying the color transformation [[on]] to the color data.
12. (Original) The method of claim 11 further comprising modifying a backlight intensity based on the ambient light level.
13. (Currently Amended) An apparatus comprising:

 [[a first memory to store color data for in image to be displayed, wherein the color
 data is stored in a first color space;]]

a first conversion agent [[communicatively coupled with the first memory]] to receive [[the]] color data for an image in [[the]] a first color space and to convert the color data to a second color space; and

a color brightness agent communicatively coupled with the first conversion agent to modify color brightness characteristics, using the second color space, of one or more portions of the image [[to be displayed]], wherein the color brightness agent is to modify the color brightness characteristics based at least in part on one or more selected from a change in backlight intensity and a change in ambient brightness[[;

a second conversion agent communicatively coupled with the color brightness agent to convert the color data from the second color space to a third color space;

a gamma control agent communicatively coupled with the second conversion agent to selectively perform a gamma transformation on the color data in the third color space;

a second memory communicatively coupled with the gamma control agent to store the modified color data in the third color space; and

a display device coupled to the second memory, the display device to display the adjusted color data to reduce power consumption of the display device]].

14. (Currently Amended) The apparatus of claim [[13]] 74 wherein the color brightness characteristics are modified before the gamma transformation is applied.
15. (Currently Amended) The apparatus of claim [[13]] 74 wherein the gamma transformation is applied before the color brightness characteristics are modified.
16. (Currently Amended) The apparatus of claim [[13]] 74 wherein the third color space is the color space to be used to display the image.
17. (Currently Amended) The apparatus of claim 16 further comprising:
a color control agent [[communicatively coupled with the second memory]] to further modify the modified color data in the third color space[[; and

a third memory communicatively coupled with the color control agent to store the further modified color data in the third color space]].

18. (Cancelled)
19. (Original) The apparatus of claim 17 wherein the color control agent comprises a processor executing instructions.
20. (Original) The apparatus of claim 17 wherein the color control agent uses a color look-up table storing data in the first color space to further modify the color data.
21. (Original) The apparatus of claim 13 wherein the first color space comprises a red-green-blue (RGB) color space and the second color space comprises a hue-saturation-intensity (HSI) color space.
22. (Original) The apparatus of claim 13 wherein the first color space comprises a YUV color space and the second color space comprises a hue-saturation-intensity (HSI) color space.
23. (Original) The apparatus of claim 13 wherein the first color space is chosen from the group of YUV, YCrCb, CIE, HSV, YIQ, CMYK, RBGA, Pantone, Munsell, NCS and the second color space is chosen from the group of YUV, YCrCb, CIE, HSV, YIQ, CMYK, RBGA, Pantone, Munsell, NCS.
24. (Original) The apparatus of claim 13 wherein the color brightness agent comprises a processor executing instructions.
25. (Original) The apparatus of claim 13 wherein the color brightness agent uses a color look-up table or gamma transfer function storing data in the second color space to modify the color data.
26. (Currently Amended) The apparatus of claim 13 further comprising an ambient light sensor communicatively coupled with the color brightness [[control]] agent to provide data indicating an ambient light level, wherein the color brightness [[control]] agent uses the ambient light level to modify the color data.
27. (Previously Presented) The apparatus of claim 13 wherein the color brightness agent controls a backlight intensity of the display device.

28. (Currently Amended) [[A machine-readable medium having stored thereon data representing sets of instructions which, when executed by a machine, cause the machine to]] An article comprising a computer-readable medium having stored thereon instructions that, when executed, cause one or more components of an electronic system to:
- convert color data for an image [[to be displayed]] from a first color space to a second color space;
- compensate for one or more selected from a change in backlight intensity and a change in ambient brightness by modifying [[modify]], in the second color space, a color intensity for one or more portions of the image;
- convert the modified color data from the second color space to a third color space[;
- apply a gamma transformation on the modified color data in the third color space to generate adjusted color data for one or more portions of the image;
- store the adjusted color data in a frame buffer; and
- display the adjusted color data to reduce power consumption of a display device]].
29. (Currently Amended) The [[machine-readable medium]] article of claim [[28]] 75 wherein the color intensity is modified before the gamma transformation is applied.
30. (Currently Amended) The [[machine-readable medium]] article of claim [[28]] 75 wherein the gamma transformation is applied before the color intensity is modified.
31. (Currently Amended) The [[machine-readable medium]] article of claim 28 wherein the third color space comprises the color space to be used to display the image.
32. (Currently Amended) The [[machine-readable medium]] article of claim 28 wherein the first color space and the third color space are the same color space.

33. (Currently Amended) The [[machine-readable medium]] article of claim 28 wherein the first color space comprises a red-green-blue (RGB) color space and the second color space comprises a hue-saturation-intensity (HSI) color space.
34. (Currently Amended) The [[machine-readable medium]] article of claim 28 wherein the first color space comprises a YUV color space and the second color space comprises a hue-saturation-intensity (HSI) color space.
35. (Currently Amended) The [[machine-readable medium]] article of claim 28 wherein the first color space is chosen from the group of YUV, YCrCb, CIE, HSV, YIQ, CMYK, RBGA, Pantone, Munsell, NCS and the second color space is chosen from the group of YUV, YCrCb, CIE, HSV, YIQ, CMYK, RBGA, Pantone, Munsell, NCS.
36. (Currently Amended) The [[machine-readable medium]] article of claim 28 wherein the [[sets of]] instructions [[, when executed by the machine, further cause the machine to apply the color transformation on the color data in the second color space]] comprise [[sets of]] instructions [[which,]] that when executed [[by the machine, further]] cause the [[machine]] one or more components to:
- determine an image brightness profile for the image [[to be displayed]];
- generate a color transformation in the second color space based on the image brightness profile; and
- apply the color transformation to the color data.
37. (Currently Amended) The [[machine-readable medium]] article of claim 36 wherein the [[sets of]] instructions [[which,]] further comprise instructions that when executed [[by the machine, further]] cause the [[machine]] one or more components to modify a backlight intensity based on the image brightness profile.
38. (Currently Amended) The [[machine-readable medium]] article of claim 28 wherein the [[sets of]] instructions [[which, when executed by the machine, further cause the machine to apply the color transformation on the color data in the second color space]] further comprise [[sets of]] instructions [[which,]] that

when executed [[by the machine, further]] cause the [[machine]] one or more components to:

determine an ambient light level of an environment for the display device;

generate a color transformation in the second color space based on the ambient light level; and

apply the color transformation [[on]] to the color data.

39. (Currently Amended) The [[machine-readable medium]] article of claim 38 wherein the [[sets of]] instructions [[which, when executed by the machine,]] further comprise instructions that when executed cause the [[machine]] one or more components to modify a backlight intensity based on the ambient light level.

40. (Currently Amended) A system comprising:

a bus;

a dynamic random access memory coupled with the bus;

a first memory coupled with the bus to store color data for in image [[to be displayed, wherein the color data is stored]] in a first color space;

a first conversion agent communicatively coupled with the bus to receive the color data in the first color space and to convert the color data to a second color space;

a color brightness agent communicatively coupled with the bus to modify color brightness characteristics of one or more portions of the image to be displayed, wherein the color brightness agent is to modify the color brightness characteristics based at least in part on one or more selected from a change in backlight intensity and a change in ambient brightness;

a second conversion agent communicatively coupled with the bus to convert the modified color data from the second color space to a third color space;

a gamma control agent communicatively coupled with the second conversion agent to selectively perform a gamma transformation on the color data in the third color space; and

[[a second memory communicatively coupled with the bus to store the adjusted color data in the third color space;

a display device coupled to the second memory, the display device to display the adjusted color data to reduce power consumption of the display device;
and]]

an ambient light sensor communicatively coupled with the first conversion agent.

41. (Original) The system of claim 40 wherein the color brightness characteristics are modified before the gamma transformation is applied.
42. (Original) The system of claim 40 wherein the gamma transformation is applied before the color brightness characteristics are modified.
43. (Previously Presented) The system of claim 40 wherein the third color space comprises the color space to be used to display the image.
44. (Currently Amended) The system of claim 43 further comprising:
a color control agent [[communicatively coupled with the second memory]] to further modify the modified color data in the third color space[[; and
a third memory communicatively coupled with the color control agent to store the further modified color data in the third color space]].
45. (Cancelled)
46. (Original) The system of claim 44 wherein the color control agent uses a color look-up table storing data in the first color space to further modify the color data.
47. (Original) The system of claim 40 wherein the first color space comprises a red-green-blue (RGB) color space and the second color space comprises a hue-saturation-intensity (HSI) color space.
48. (Original) The system of claim 40 wherein the first color space comprises a YUV color space and the second color space comprises a hue-saturation-intensity (HSI) color space.
49. (Original) The system of claim 40 wherein the first color space is chosen from the group of YUV, YCrCb, CIE, HSV, YIQ, CMYK, RBGA, Pantone, Munsell, NCS

and the second color space is chosen from the group of YUV, YCrCb, CIE, HSV, YIQ, CMYK, RBGA, Pantone, Munsell, NCS.

50. (Original) The system of claim 40 wherein the color brightness agent comprises a processor executing instructions.
51. (Currently Amended) The system of claim 40 wherein the color brightness agent [[uses]] is to use one or more of a color look-up table [[or]] and a gamma transfer function storing data in the second color space to modify the color data.
52. (Currently Amended) The system of claim 40 wherein the color brightness agent [[controls]] is to control a backlight intensity of the display device.

Claims 53-72 (Cancelled)

73. (New) The method of claim 1, further comprising applying a gamma transformation on the modified color data in the third color space to generate adjusted color data for one or more portions of the image.
74. (New) The apparatus of claim 13, further comprising:

a second conversion agent communicatively coupled with the color brightness agent to convert the color data from the second color space to a third color space;

and

a gamma control agent communicatively coupled with the second conversion agent to selectively perform a gamma transformation on the color data in the third color space.
75. (New) The article of claim 28, wherein the instructions further comprise instructions that when executed cause the one or more components to:

apply a gamma transformation on the modified color data in the third color space
to generate adjusted color data for one or more portions of the image.
76. (New) A method comprising:

determining to reduce power consumption of a display of an electronic system having a battery;

decreasing the power consumption of the display by decreasing a backlight intensity;

converting color data for pixels of an image from a first color space to a second color space;

at least partially compensating for the decrease in the backlight intensity by increasing the color intensity for the pixels in the second color space; and

displaying the image after said increasing the color intensities.

77. (New) The method of claim 76, further comprising, before said displaying, converting the modified color data from the second color space to a third color space.
78. (New) The method of claim 76, wherein said compensating is based at least in part on an ambient brightness.